



### DESCRIPTION

Solid wire for welding 2%Ni steel

Submerged arc wire designed for welding low-alloyed steels for low temperature applications. Typically, they are used for welding 2.5% Nickel steels and other materials requiring good toughness at temperatures as low as -60°C.

### SPECIFICATIONS

ISO 14171-A	S2Ni2	AWS A5.23	ENi2
DIN	-	Werkstoff Number	-
Certifications	-	Shielding	DAIKOFLUX 493-W
Positions	PA, PB, PC	Current	DC/AC

### ASME QUALIFICATIONS

F-No (QW432)	6
A-No (QW442)	10

### FERRITE

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### PREN

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### HARDNESS

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### CHEM. COMP. %

#### DEFAULT

C	0.1
Mn	1
Ni	2.25
P	0.01
S	0.01
Mo	0.01
Si	0.15
Cu	0.15

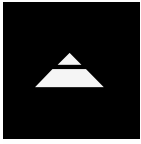
### MECHANICAL PROPERTIES

	MIN	VARIANT
Tensile strength R <sub>m</sub> MPa	-	610
Yield strength R <sub>p0.2</sub> MPa	-	510
Elongation A (L <sub>0</sub> =5d <sub>0</sub> ) %	-	24
Impact Charpy ISO-V	-	65J @ -60°C
Impact Charpy ISO-V	-	-

### WELDING PARAMETERS

	2.4 mm	3.2 mm	4 mm
Ampere	300A - 410A	430A - 530A	480A - 580A
Voltage	26V - 30V	27V - 31V	27V - 32V
Packaging	Ø 2,0÷4,0mm	Ø 2,0÷4,0mm	Ø 2,0÷4,0mm
Packaging Type	K415 spool and drums. K415 spool and drums. K415 spool and drums.		





# 2Ni

DESCRIPTION

CRYOGENIC STEELS

2Ni

## APPLICATION

Ideal for fabricating storage tanks, process plants, and associated pipework, especially in scenarios demanding good fracture toughness from as-welded joints, even in temperatures as low as  $-60^{\circ}\text{C}$ . The addition of approximately 2.5% Ni enhances microstructural refinement and procedural tolerance compared to plain CMn weld metal. It also supports the formation of a stable patina, meeting the characteristics of weathering steels, offering an alternative to using matching consumables. Preheating should align with the base material and its thickness. While AWS consumable specifications may recommend PWHT, many fabrications may be left as-welded, with the necessity for PWHT generally determined by applicable design codes.

## ALLOY TYPE

Nominally 2,5%Ni low alloy steels.

## MICROSTRUCTURE

In the as-welded condition the microstructure is ferritic with a component of acicular ferrite for optimum toughness.

## MATERIALS

Low temperature applications, fine-grained steels that contain up to 2.5% Nickel.

**ASTM:** A203 gr. A & B plate, A333 gr. 6 pipe, A350 gr. LF1 & LF2 forgings, A352 gr. LC2 casting.

**API:** 5L X52, 5L X56, 5L X60, 5L X65.

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The information in this datasheet is the result of detailed research and is considered accurate as of the publication date. However, we cannot guarantee its complete accuracy, and it is subject to change without notice. Actual results may vary due to many factors like welding procedures, material composition, temperature conditions, bevel configuration, and specific manufacturing techniques. We accept no liability for any errors or omissions in this datasheet. For the most current information, please visit [www.daikowelding.com](http://www.daikowelding.com).

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